

REMARKS/ARGUMENTS

Claim Amendments

The Applicant has amended claim 13 in three places to correct the term "service specification" to "service level specification". Accordingly, Claims 1-15 are pending in the application. Favorable reconsideration of the application is respectfully requested in view of the foregoing amendments and the following remarks.

Applicant's answers to Response to Arguments

The Examiner states that the claims are interpreted in a broad literal reasonable sense with due respect to the applicant's specification. The Applicant assumes from this statement that the Examiner has reviewed the Applicant's written description in line with the Federal Circuit: "... a further explanation of a "reasonable" interpretation--one that does not "ignore any interpretative guidance afforded by the applicant's written description." *In re Morris*, 127 F.3d 1048, 1054, 44 U.S.P.Q.2d (BNA) 1023, 1027 (Fed. Cir. 1997).

The Examiner indicates that the Applicant does not define "...the claim terms, as well as many other terms in the claim". The terms recited by the Examiner are specifically, 1) "service level specification" and 2) "ensuring the sum of the provided quality of service...does not exceed limits define din the service level specification."

Regarding claim term 1), the Applicant respectfully points to page 5, lines 7-16 of the Application:

A high level SLA is mapped to a detailed policy representation in order to be used by the different PDPs and PEPs. The IETF (Internet Engineering Task Force) internet draft "Service Level Specification Semantics, Parameters and negotiation requirements" of July 2000, discloses an example of an outline for the definition of a SLS format. Some examples of parameters in an SLS are scope, i.e. the domain to which the SLS applies, flow id, including the Differentiated Services Code Point, traffic conformance testing, that is specifying e.g. the token bucket parameters, excess treatment which specifies how to treat excess traffic, and performance guarantees which defines the service guarantees that the network offers to the corresponding packet stream. These are basically the quality of service parameters as discussed before (bandwidth, delay, jitter, and reliability).

Regarding claim term 2), the Applicant does not understand the need to define this phrase as this is a step in the method claim in which the QoS that is provided is in

agreement with the QoS limits in the Service Level Specification. Nevertheless, as stated in the Applicant's Specification:

Figure 4 depicts a bandwidth broker BB41 according to the invention. The bandwidth broker BB41 comprising a control unit PU41 adapted to control edge nodes to ensure that the quality of service provided on the connections does not exceed limits defined in the service specification, a storage STO41 for storing the service specification and an input output unit IOU41 to communicate with the edge node. (page 14, lines 21-25)

The Examiner indicates that the "at least two connections" has not been given patentable weight by the Examiner because the recitation occurs in the preamble. The Applicant respectfully disagrees with the conclusion of the Examiner.

MPEP 2111.02 - Any terminology in the preamble that limits the structure of the claimed invention must be treated as a claim limitation. See, e.g., *Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d 1251, 1257, 9 USPQ2d 1962, 1966 (Fed. Cir. 1989).

"[A] claim preamble has the import that the claim as a whole suggests for it." *Bell Communications Research, Inc. v. Vitalink Communications Corp.*, 55 F.3d 615, 620, 34 USPQ2d 1816, 1820 (Fed. Cir. 1995). "If the claim preamble, when read in the context of the entire claim, recites limitations of the claim, or, if the claim preamble is 'necessary to give life, meaning, and vitality' to the claim, then the claim preamble should be construed as if in the balance of the claim." *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305, 51 USPQ2d 1161, 1165-66 (Fed. Cir. 1999). See also *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951)

The Applicant respectfully contends that the "at least two connections" are not just recitations. They in fact introduce the structure of the method where "...a first connection handled by a first network edge node and a second connection handled by a second network edge node,..."; each of the two connections being handled by a different edge node. The body of the claim refers to the first and second edge nodes as receiving the service level specification. And, the sum of the QoS provided to the two connections, by the claimed invention, does not exceed the service level specification. The Applicant respectfully submits that the subject phrase, in the preamble, is required for completeness. Two connections are specified and the connections are located in different edge nodes and the sum of QoS via the two connections must be less within the Service Level Specification.

Claim Rejections – 35 U.S.C. § 103 (a)

The Examiner rejected claims 1-15 under 35 U.S.C. § 103(a) as being unpatentable over Nishi (US 2001/0027484 A1) in view of Rhee, *et al.* (US 2004/0081092 A1). The Applicant respectfully traverses the rejection of these claims.

The Applicant respectfully directs the Examiner to claim 1.

1. (Currently Amended) A method for providing a predefined quality of service between two communication partners, wherein the two communication partners are connected by at least two connections, a first connection handled by a first network edge node and a second connection handled by a second network edge node, and wherein the method comprises the steps of:

receiving or defining a service level agreement in a service level specification,

distributing the service level specification to the first and the second edge node by means of partitioning or by means of replication; and

controlling the first and the second edge nodes and thus ensuring that the sum of the provided quality of service on said connections between the two communication partners does not exceed limits defined in the service level specification. (emphasis added)

Contrary to the Examiner's statement that all elements are disclosed in the Nishi and Rhee references, the claim preamble and the elements regarding 1) receiving or defining a service level agreement in a service level specification; 2) distributing the service level specification to the first and the second edge node by means of partitioning or by means of replication and 3) ensuring the sum of the provided quality of service on said connections between the two communication partners does not exceed limits defined in the service level specification, are lacking.

In the rejection of claim 1, the Examiner indicates that the specific limitations of claim 1 are covered by the cited portion of the Nishi reference. This portion (paragraphs [0049], [0051], [0054] and [0058]-[0060]) includes Figures 1-3 and generally discloses operation of an embodiment of the Nishi model. The Nishi reference fails to discuss or disclose the Quality of Service metric. The Applicant respectfully contends that the bandwidth broker 23, which includes the service level agreement (SLA) management device 231 fails to ensure that the "sum of the ... quality of service on said connections ... does not exceed limits defined in the service level specification." The portion of Nishi cited against the Applicant's limitation (in paragraph [0051]) including the SLA

management device 231 notes that "[T]he SLA management device 231 registers the service information agreed upon between the providers in the service level agreement storage section 221, and also manages such information. Furthermore, the service level agreement management device 231 also provides an interface for registering, editing and deleting service level agreement information input via the output device 21." (emphasis added). Even the SLA management device 231 fails to disclose the above limitation relating to ensuring a quality of service level according to the SLS.

The cited portion of Nishi discloses various functions of the bandwidth broker and workflow server, but nowhere in the cited portion, or for that matter the entire reference, are at least the limitations disclosed regarding "distributing the service level specification by means of partitioning or replication" or "ensuring the sum of the provided quality of service does not exceed limits defined in the service level specification."

The Rhee reference discloses an invention that requires ingress edge nodes and egress edge nodes to accomplish admission control. As the rejection states, Nishi does not disclose *first and second network edge nodes*. The Applicant does not disagree that Rhee discloses two network edge nodes. However, the Rhee reference uses the edge nodes differently than the applicant. The base object of Rhee, controlling admission, is different from that of the Applicant as the Applicant is ensuring that a QoS does not exceed specified limits according to an agreed to service level specification between communication partners (e.g., customer and network provider or two network providers). The Rhee reference is directed to "call admission" through the use of ingress/egress edge nodes. As indicated in the Office Action Rhee is cited only for the two edge nodes missing from the Nishi reference.

Nowhere is there a mention of a service level specification (SLS) in either the Nishi reference or the Rhee references. Nishi and Rhee both fail to disclose or suggest use of the SLS. The SLS is different from a Service Level Agreement as the Agreement is included in the SLS (see above in 'Answers' for explanation of SLS). Nor does either reference disclose distributing an SLS to different edge nodes by partitioning or replication. And, essentially both references fail to disclose all the limitations that include the SLS.

The Applicant respectfully contends that neither reference, Nishi or Rhee disclose or teach all the limitations of claim 1. This being the case, the Applicant respectfully requests the allowance of claim 1 and analogous claims 9 and 13.

Claims 2-8, 10-12 and 14-15 depend from claims 1, 9 and 13 respectively and recite further limitations in combination with the novel elements of the independent claims. Therefore, the allowance of claims 2-8, 10-12 and 14-15 is respectfully requested.

CONCLUSION

In view of the foregoing remarks, the Applicant believes all of the claims currently pending in the Application to be in a condition for allowance. The Applicant, therefore, respectfully requests that the Examiner withdraw all rejections and issue a Notice of Allowance for all pending claims.

The Applicant requests a telephonic interview if the Examiner has any questions or requires any additional information that would further or expedite the prosecution of the Application.

Respectfully submitted,

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Date: August 9, 2011

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